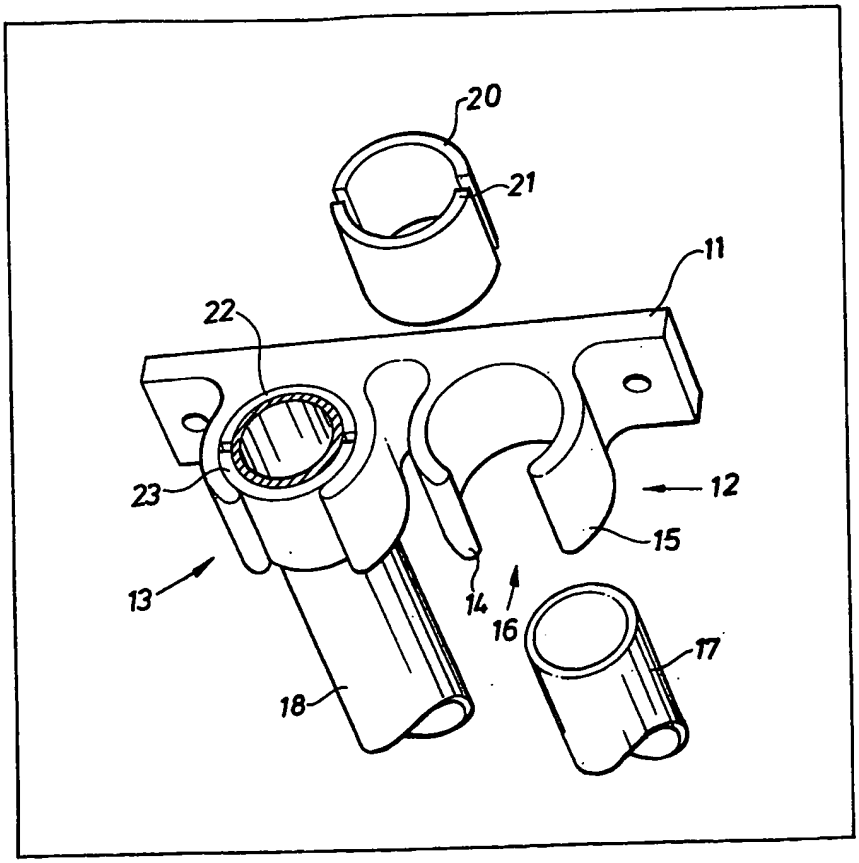
(12) UK Patent Application (19) GB (11) 2 080 676 A

(21) Application No 8025306
(22) Date of filing 2 Aug 1980
(43) Application published
10 Feb 1982
(51) INT CL³
F16L 3/10
(52) Domestic classification
A4B 3C 5A1D
(56) Documents cited
GB 1564357
GB 1359150
GB 1349983
GB 1180732
GB 927731
GB 722083
GB 491385
(58) Field of search
A4B
F2D
(71) Applicants
Micro-Mesh Engineering Limited,
51 Basford Road, Old Basford, Nottingham NG6 0JG
(72) Inventor
Robert Henry Underwood
(74) Agents
Eric Potter & Clarkson,
14 Oxford Street,
Nottingham NG1 5BP

(54) **Clips for holding round-section elongate members**

(57) The clip has a base (11) provided with one or more pairs of jaws (12, 13). The jaws of each pair are concave to define a circular region with a gap (16) for receiving a pipe (17) or other such member. A pair of resilient, arcuate wedges (22, 23) are slid into place between the jaws and the pipe to wedge the pipe in position.



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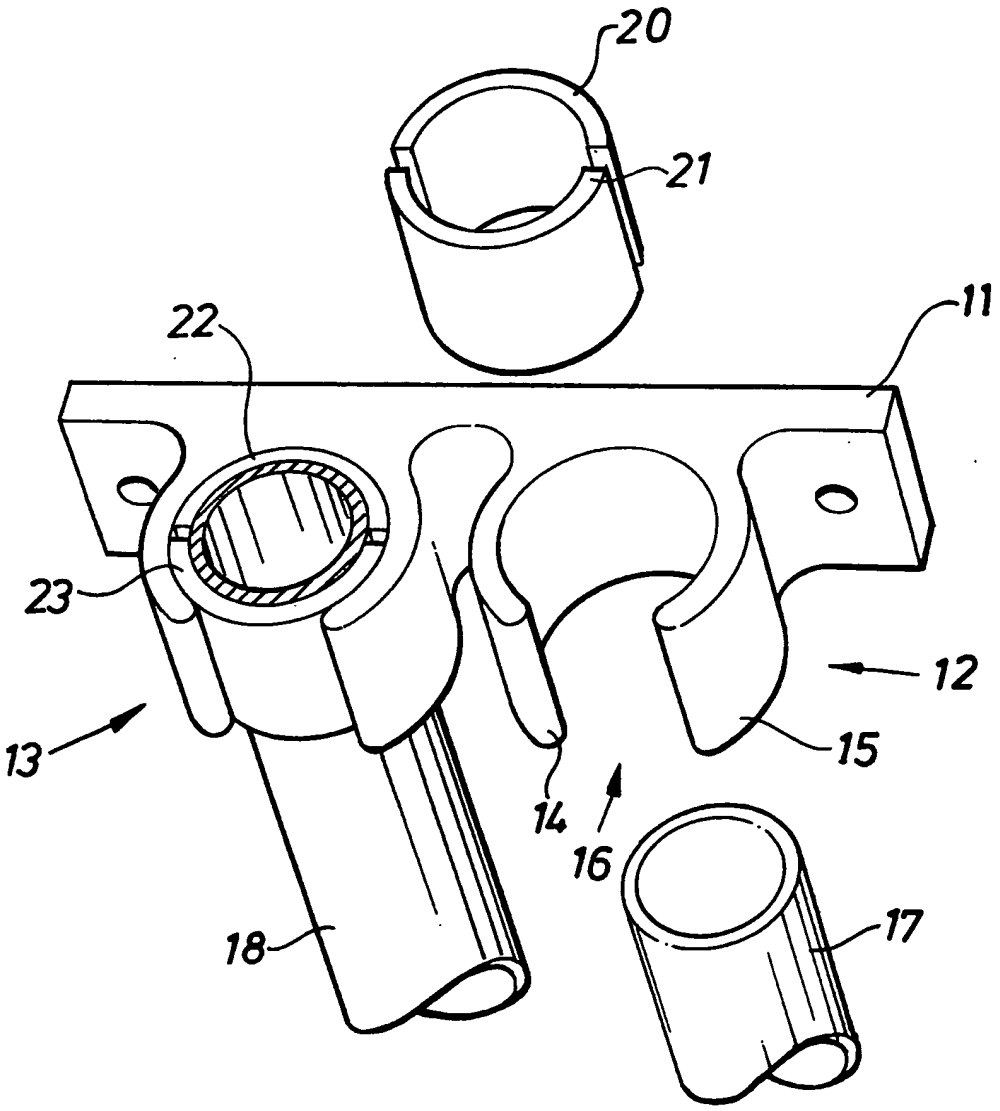
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SPECIFICATION

Clips for holding round-section elongate members

This invention is concerned with clips for holding round-section elongate members, such as pipes and cables. Such clips are commonly used at spaced intervals for mounting pipes on walls, for example, in both industrial and domestic premises.

One type of clip commonly used comprises two jaws of part-circular form, made of resilient material and with a gap between the jaws. A pipe is forced through the gap so that the resilient jaws grip the pipe. The inner diameter between the jaws has to be substantially the same as the outer diameter of the pipe to be gripped. Furthermore, there is a tendency for pipes to come adrift from the clips, e.g. through water-hammer in the pipes. This latter problem has been overcome by fitting a closure member across the gap, but the former problem remains. Also, with larger pipes and cables, this arrangement is insufficiently strong.

Another arrangement comprises two metal parts formed with complementary recesses. These metal parts are bolted together for clamping a pipe in the recesses. A rubber grommet is fitted onto the pipe, so that the pipe is resiliently gripped. The clip can be used with pipes of different diameters by varying the thickness of the grommets. This is an expensive arrangement and is convenient since bolting of the two parts is required. One particular problem is that, where each part has a row of recesses, for clamping several pipes side by side, it is necessary to hold all the pipes in the respective recesses of one part whilst the other part is fitted in position, there being a tendency for the pipes to spring out of the desired positions.

The present invention provides an improved clip for pipes, cables or the like.

In accordance with this invention, a clip for holding round-section elongate members comprises a base adapted for mounting on a surface, a pair of jaws fixed to the base and having complementary concave surfaces, a gap being defined between the jaws to permit entry of a said elongate member between the jaws, and a pair of arcuate-section wedging pieces slidable into position between the jaws and the said member at opposite sides of the latter, so as resiliently to grip the member within the jaws.

The jaws or the wedging pieces may be made of resilient material, or both may be resilient. The resilience need only be sufficient to facilitate wedging. It is convenient, for example, for the wedges to be made of nylon, which is sufficiently resilient and also has a low friction coefficient permitting easy sliding of the wedges into position.

Reference is now made to the accompanying drawing wherein the sole Figure is a perspective view of a clip assembly according to the invention.

The assembly shown comprises a base plate 11 integrally moulded from plastics material with two pairs of jaws 12, 13. This unitary member may alternatively be made by cutting lengths from a metal or plastics extrusion, for example.

In each pair of jaws, the jaws 14, 15 are of arcuate form with concave surfaces facing each other, so as to define between the jaws a continuous surface extending over the major part of the inner circumference of a cylinder. A gap 16 is left between the jaws of each pair to permit entry of a pipe 17, 18 between the jaws.

The assembly also includes two pairs of wedging pieces 20, 21, 22, 23. Each wedging piece is of arcuate form the angle of the arc being slightly less than 180° so that each piece is slightly smaller than a half-cylinder. Each piece may be moulded or extruded from a plastics material having some resilience, such as nylon.

As shown on the left of the Figure, each pair of wedging pieces such as 22, 23 receives a pipe such as 18 between the concave surfaces thereof and the pair of jaws 13 clamps the wedging pieces 22, 23 onto the pipe to hold the latter.

To fit a pipe into the assembly, each pipe is held against one of the wedging pieces in its position between the jaws and opposed to the gap 16. The other wedging piece is then forceably slid into position to bridge the gap. Each pipe can, therefore, be fitted independently of the other and this is particularly advantageous where there is a row of several parallel pipes. The fitting is particularly simple to carry out, and the pipe can be firmly clamped in position, without risk of vibration, such as "water-hammer" releasing the pipe.

For use with a pipe of smaller diameter than those shown, it is merely necessary to use wedging pieces of greater thickness.

It is envisaged that the clips may be provided separately, each with a respective base plate.

In the embodiment shown, it is also possible for the two adjacent jaws of the two pairs of jaws to be defined by opposite concave surfaces of a single member, providing that the wedging pieces are sufficiently resilient. Hence in a row of clips, all of the jaws except those at the ends may be so formed.

CLAIMS

1. A clip for holding round-section elongate members comprising a base adapted for mounting on a surface, a pair of jaws fixed to the base and having complementary concave surfaces, a gap being defined between the jaws to permit entry of a said elongate member between the jaws, and a pair of arcuate-section wedging pieces slidable into position between the jaws and the said member at opposite sides of the latter, so as resiliently to grip the member within the jaws.

2. A clip according to Claim 1, wherein the wedging pieces are made of resilient material.

3. A clip according to Claim 1 or 2, wherein the jaws are resilient.

4. A clip according to any preceding Claim, wherein the wedges are each capable of bridging said gap.

5. A clip according to any preceding Claim,

wherein the wedges are made of plastics material with a low coefficient of friction.

6. A clip according to any preceding Claim, including a plurality of pairs of said jaws mounted on the base and wedging pieces associated with each pair of jaws.

7. A clip for holding round-section elongate members and constructed substantially as herein described with reference to the accompanying drawing.

8. A method of securing a round-section elongate member between a pair of jaws having facing concave surfaces with a gap between the jaws, comprising passing the elongate member through the gap and sliding a pair of arcuate wedging pieces axially along the member between the latter and the jaws, so that one of them bridges said gap, whereby said pieces wedge the member between the jaws.

Printed for Her Majesty's Stationery Office by The Tweeddale Press Ltd., Berwick-upon-Tweed, 1982.
Published at the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.